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FOOD SECURITY AND FOOD SOVEREIGNTY–
THE CASE OF BRITISH COLUMBIA

By

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RUNNING HEAD:
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Abstract

The world faces global pressures from climate change, severe weather patterns and economic instability that are expected to have a large impact on the sustainability of the environment, the food system and food security. The use of scientific innovation, efficient agricultural practice and capital investment to increase food production remains the dominant paradigm of food security, but is under contestation from food sovereignty social movements. An interdisciplinary research approach comparing the underpinnings of food security and food sovereignty demonstrates how these constructs are used and influence actions in British Columbia to address food insecurity and lead to sustainable food systems. Collaborative actions to increase access to healthy local foods and develop sustainable local food systems are evident in British Columbia. The absence of a poverty reduction strategy, along with concerns about natural resource and agricultural land preservation as well as unresolved food and Aboriginal peoples' rights remain areas for food sovereignty social movement action.

FOOD SECURITY AND FOOD SOVEREIGNTY- THE CASE OF BRITISH COLUMBIA

Food Security and Food Sovereignty - The Case of British Columbia

Table of Contents

1.	Introduction and Research Aims	Page 1
2.	Research Methodology.....	Page 3
2.1	Interdisciplinary Research: Food Security and Sovereignty Paradigms and Frameworks.....	Page 4
2.2	Comparative Analysis of Food Security and Food Sovereignty.....	Page 5
3.	Concepts of Food Sovereignty and Food Sovereignty.....	Page 6
4.	Food Insecurity in British Columbia.....	Page 8
4.1	Indicators of Food Insecurity in Canada.....	Page 9
4.2	Poverty and Food Insecurity.....	Page 9
4.3	Food Availability and Stability of the Food System.....	Page 10
5.	Food Security and Food Sovereignty Actions in British Columbia.....	Page 11
5.1	Food Policy Actions.....	Page 11
5.2	First Nations Health Authority and Food Sovereignty.....	Page 12
5.3	Sustainable Agriculture and Food System Policy.....	Page 13
5.4	Universities, Community Agriculture and Sustainable Food Systems	Page 14
5.5	Access to Local Food and Food Production.....	Page 15
6.	Conclusion: Food Sovereignty Movements for Rights and Agency.....	Page 16
7.	Appendix A.....	Page 18
8.	Appendix B.....	Page 21
9.	Appendix C.....	Page 23
10.	References.....	Page 24

1. Introduction and Research Aims

The world faces global pressures that are expected to have a large impact on the sustainability of the environment, the food system and food security. Global societal risks for 2014, identified by the World Economic Forum (WEF), reflect inter-connected economic, environmental, geopolitical and technological issues. The forum predicts the risks will include a:

... fiscal crisis in key economies, structurally high unemployment/underemployment, water crisis, severe income disparity, failure of climate change mitigation and adaptation, greater incidence of extreme weather events (e.g. floods, storms, fires), global governance failure, food crisis, failure of a major financial mechanism/institution, and profound political and social instability (WEF, 2014, p. 9).

The original concept of food security arose following World War 2 with international reconstruction efforts by the United Nations to resolve world hunger. Scientific agricultural practices, technology and investment were implemented with trade and aid policy to increase food production and distribution efficiency, increase access to affordable food by more people and increase farm revenues (Lang & Barling, 2012, p. 316). Reliance on scientific innovation, efficient agricultural practice and capital investment to increase food production to meet world needs for food, remain the dominant paradigms with which to approach the issue of food security (Lang & Barling, 2012, p. 313).

An alternate discourse, that of food sovereignty, was introduced in 1996 by La Via Campesina (LVC) – an international pluralist social movement organization that perceives "small-scale sustainable agriculture as a way to promote social justice and dignity" (La Via Campesina, 2011). Food sovereignty arose as a counter position to the international development and trade agendas (Altieri & Nicholls, 2008, p. 474; Boyer, 2010, pp. 330-331).

Critics of the food security agenda assert that this agenda perpetuates inequality, injustice and contributes to the food insecurity of farmers and peasants in developing countries while benefiting Northern countries and corporations. The food sovereignty movement discourse "challenges the foundations of the current agri-food order and proposes a set of concrete alternatives for both theory and practice" (Wittman, 2011, p. 87). The concept has gained space in the normative discourse of some government and organizations, with issues of rights and sustainability entering into the dominant food security language. The food sovereignty construct has sparked interest in research to establish alternate food system practices towards improved equity, social and ecological sustainability (Wittman, 2011, pp.87-89).

Responses taken to mitigate the global risks outlined by the WEF have the potential to have far reaching impacts on the sustainable and resiliency of food systems and the ability to address, or to hinder, food security. The concepts of food security and food sovereignty both envision the means by which to improve current conditions and improve resiliency, but they differ in philosophy, theory and actions, with one concept based on accepted scientific and technical development, trade and capital investment foundations; the other based on human rights, localized agroecological production and distribution and grass-roots participatory democracy.

Addressing any aspect of the inter-connected issues of food insecurity requires a broad-based and diverse interdisciplinary approach in the conduct of research and the development of alternatives that work towards sustainable positive change. An interdisciplinary research perspective was selected: 1) to explore the underpinnings and perspectives of food security and food sovereignty social movements; 2) to gain an understanding of food security and food sovereignty constructs used in British Columbia; and 3) to broadly assess how actions of food

security and sovereignty are implemented in British Columbia to address food insecurity and establish sustainable food systems. The aim of this research is to understand potential areas for integration between the concepts, approaches and actions of food security and food sovereignty in order to better address food insecurity, through policy and action, in British Columbia. It is well outside of the scope of this paper to explore with rigour the intertwined complexities and foundations of human rights or economic, trade and agro-environmental policy.

2. Research Methodology

Marsden (2011) mentions the sheer volume of literature on critical agri-food practice and alternative food networks, and the subject of "how alternative movements are providing opposition to the dominant regime – has become a new defining moment for the twenty-first century rural sociological enterprise...potentially transformatory in a paradigmatic sense: an argument hotly contested, but one which is important to portray and progress" (Marsden, 2011, p. 257). A Google search using the key words 'food security,' food sovereignty,' 'policy' and 'interdisciplinary,' supports Marsden's statements. The search elicited 2,700,000 sources. A systematic review of the literature was therefore beyond the scope of this paper.

A scan of the literature was performed using Google Scholar and the search terms "food sovereignty, interdisciplinary and Canada" between February 1, 2014 and March 1, 2104. Further literature searches were conducted through JSTOR and Google, using the additional search terms, 'British Columbia, frameworks and indicators,' to search for secondary references, data sources and terms, and to elicit information from government and non-government organization (NGO) websites. Emphasis was placed on reviewing recent literature, mainly after the 2007-08 "food crisis."

2.1 – Interdisciplinary Research: Food Security and Sovereignty Paradigms and Frameworks

Interdisciplinary and transdisciplinary paradigms and frameworks identified in the recent literature were reviewed to gain a broad understanding of food security and food sovereignty paradigms and frameworks. Wittman (2011) explores key differences between the "corporate/neolithic food regime" (p. 91) and the critical alternative position of food sovereignty and considers if food sovereignty is forming a new rights based food regime. Wittman (2011) also describes the interdisciplinary practice based and conceptual research that considers the interconnectivity of food, ecology, citizenship, and social organization in social and agroecological sciences.

Marsden (2012) outlines two competing modern agri-food policy sustainability paradigms, the bio-economic and the eco-economic, comparing their dimensions, parameters and key engagement concepts for adaptive capacity building (pp. 262-270). Lang and Barling (2012) critique the concepts of food security and food sovereignty from a food policy perspective, identifying the need for a more coherent framework around sustainable food systems (Lang and Barling, 2012). In a discussion paper prepared for "Food Sovereignty: A Critical Dialogue International Conference" at Yale University in 2013, Vallejo-Rojas, Ravera and Rivera-Ferre (2013) discuss a conceptual integrated socio-ecological systems and vulnerability framework and approach to agri-food system assessment and position food sovereignty as an alternative policy goal for the management of agri-food systems (Vallejo-Rojas, Ravera, & Rivera-Ferre, 2013).

Reardon and Pérez (2010) compare conventional agriculture and food sovereignty in their paper exploring the large-scale adoption of agro-ecological practices in Cuba and the development of indicators for food sovereignty (Reardon & Pérez, 2010). Fernandez, Mendez

and Bacon (2013), from agroecology and environmental studies, describe their transdisciplinary approach based on sustainable livelihoods, political ecology and food sovereignty, and the applicability of such an approach for community based action research to explore seasonal hunger in Southern coffee farmer communities (Fernandez, Mendez and Bacon, 2013).

Parmentier (2014), policy advisor on food and agriculture for Oxfam-Solidarity, contrasts peasant and industrial agriculture paradigms, agro-ecological and sustainable intensification paths in *Scaling-Up Agroecological Approaches: What, Why and How?* and provides cases supporting large scale agro-ecological practice application in the discussion paper (Parmentier, 2014).

Barthel and Isendahl (2013), from a perspective of ecological economics, landscape archaeology and history, in a review of pre-industrial examples of classic Maya civilization and Byzantine Constantinople, conceptualize how non-industrial agriculture is able to contribute to the social-ecological resiliency of city regions (Barthel & Isendahl, 2013).

2.2 – Comparative Analysis of Food Security and Food Sovereignty

A comparative framework of the dimensions of the food security and food sovereignty paradigms (Appendix A), based on the interdisciplinary research, was developed to gain a broad understanding of the food security and food sovereignty paradigms. In addition, Friedman's (1987) *Planning in the Public Domain: From Knowledge to Action* provided information on the historical underpinnings and theory of community and urban planning (pp. 51-85) and Fairbairn (2008) on the theoretical bases of modern food regimes as the roots of food sovereignty social movements (Fairbairn, 2008). A second comparison (Appendix B) establishes how food security and food sovereignty concepts have been adapted for use by organizations in British Columbia to fit their organizational needs and contexts. A consolidated perspective of the dimensions and

pillars of food security and sovereignty (Appendix C) was prepared solely for the purposes of this paper, to review actions in British Columbia and to identify potential areas of common ground or integration. Integration of any aspects of the concepts of food security and food sovereignty need to be constructed within the communities of action.

3. Concepts of Food Sovereignty and Food Security

Concepts of food security and food sovereignty have evolved over time, adapting to changing conditions, knowledge, beliefs and organization. The most recent FAO (2013) definition of food security is:

a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Based on this definition, four food security dimensions can be identified: food availability, economic and physical access to food, food utilization and stability over time" (p. 50).

The FAO definition is widely adopted and adapted by organizations in British Columbia. The term community food security is also used by some organizations. Community food security is defined both as a process and an outcome, and "exists when all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone" (Dietitians of Canada, 2007, p. 2). The dimensions of community food security are Availability, Accessibility, Adequacy, and Acceptability. The additional dimension of Agency has been adopted in some Canadian descriptions (Rocha, 2008).

Food sovereignty is broadly defined as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to

define their own food and agriculture systems" (La Via Campesina, 2011). Six pillars of food sovereignty were defined at the Nyéléni 2007 Forum for Food Sovereignty. Food sovereignty is a condition which: Focuses on Food for People; Values Food Providers; Localises Food Systems; Puts Control Locally; Builds Knowledge and Skills; and Works with Nature (International Steering Committee, LVC, 2007, p. 1). Food Secure Canada (2011) includes an additional pillar to address the rights of Indigenous Peoples in Canada, saying that food sovereignty is a condition which also: Recognizes that Food is Sacred (Food Secure Canada, 2011, p.10).

Lang and Barling (2012) predict that a broader systems construct may better define food security in view of pending climate change and instability.

While there is growing awareness of food systems' capacities being under stress, there is as yet less recognition of how extensive change must be before food systems are sustainable. Yet a basic truth remains that the only food system to be secure is that which is sustainable, and the route to food security is by addressing sustainability. Translating what is meant by sustainability is, however, a matter of marrying complex standards, values and modes of delivery, from production to consumption. It is possible, we conclude, that the notion of food security may even fade into obscurity and be replaced by a more all- encompassing term such as sustainable food systems" (pp. 322-323).

The term sustainable food systems is gaining ground in British Columbia, but there is not as of yet a widely adopted definition. The Agricultural Sustainability Institute at UC Davis (2014) defines a sustainable community food system as a collaborative network "that integrates sustainable food production, processing, distribution, consumption and waste management in order to enhance the environmental, economic and social health of a particular place. Farmers,

consumers and communities partner to create a more locally based self-reliant food economy" (UCDavis, 2014).

4. Food Insecurity in British Columbia

"Knowing that there is enough food to go around does not mean that the food does go around" (Mooney & Hunt, 2009, p. 475).

Food insecurity in Canada is defined as "a household's experience of food insecurity or the inadequate or insecure access to adequate food due to financial constraints" (Tarasuk, Mitchell & Dachner, 2012). Households are food insecure when, in the prior year, "they were uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money for food" (Health Canada, 2012).

It was ten years ago that *The Right to Food Case Study: Canada* was prepared for the FAO Intergovernmental Working Group on the Elaboration of a set of Voluntary Guidelines for the Realization of the Right to Adequate Food in the context of National Food Security (2004), and yet rights to food remain a concern for vulnerable groups in British Columbia.

Dependence on charitable food aid points to the need to clarify the role of the right to food in political statements of national commitments to human rights conventions. It underlines the need for adequate programmes of social security inclusive of vulnerable peoples and of the just distribution of wealth and income in society. Fragmented food policy should be replaced by 'joined-up' food policy (linking agriculture, sustainability, nutrition and health and social welfare) as well as intergovernmental and inter-departmental coordination and accountability. The current limits of justiciability underline a strong need for efficient and workable mechanisms for claiming the right to food. Finally the role of civil society in

advancing economic and social rights and particularly the right to food requires strengthening (Riches, 2004, p.8).

4.1 – Indicators of Food Insecurity in Canada

Data collected in Canadian surveys under-report food insecurity in some populations, and omit some vulnerable population subgroups: "Aboriginals on reserves, persons living in the Yukon and Northwest Territories and remote areas of Quebec and Ontario, and homeless people" (Tarasuk, 2005, p. 301-302). The North is experiencing the highest rates of food insecurity (Tarasuk, Mitchell & Dachner, 2012, p. 26-27).

Tarasuk, Mitchell and Dachner (2012) report that an estimated 12.7 percent of B.C. families experience food insecurity (p.15). The report indicates that while 76 percent of households that rely on social assistance were found to be food insecure (p. 11), 63.2 percent of food insecure families receive salaries and income (p.12).

4.2 – Poverty and Food Insecurity

British Columbia does not have a food policy plan or a poverty reduction plan. With the high cost of housing in B.C., many low-income families are not able to afford nutritious food and other basic living expenses. A reported 10.7 percent of British Columbians live in poverty, and, if the Market Basket Measure is used as the benchmark, the estimate is 16.5 percent (BC Poverty Reduction Coalition, 2014). The Cost of Eating in British Columbia 2011 reports that the nutritious food basket for a family of four costs, on average, \$846.43 each month (Dietitians of Canada, 2011). This consumes 15 percent of income for medium income families, and 34 to 46 percent for a family on low income or income assistance (p. 2, 6).

Loopstra (2012) states, "in the absence of other deliberate policy interventions to address food insecurity, food banks appear to have become the de facto public policy response to

household food insecurity in Canada" (p.498). According to Food Banks Canada (2012), 96,150 British Columbians used Food Banks, a 23.1 percent increase since 2008 (Food Banks Canada, 2012). The highest need is in single parent families, aboriginal persons and people receiving disability or income assistance (Food Banks Canada, 2012, p. 20). Loopstra (2012) indicates that most food insecure households in Canada did not use food banks, either because they were not available, or they were not seen as a way to meet needs or to obtain suitable or healthy foods. Loopstra (2012) states that there is no evidence to indicate food banks prevent food insecurity (pp.498, 508-10).

There is an expectation in Canada that citizens have the right to food. Food insecurity and poverty data indicate that this is not currently a universal right, and, in particular as it relates to the right to healthy food. There remains a need for policy and action towards more equitable access to food in British Columbia.

4.3 – Food Availability and Stability of the Food System

B.C. farmers only produce about 48 percent of the food consumed in B.C. (Ministry of Agriculture, 2006, p.1). In addition, available agricultural land is under pressure from development (Condon, Mullinix, Fallick, & Harcourt, 2010),

Less than 5 percent of land in BC is suitable for agriculture, which was one of the primary reasons for the development of the Agricultural Land Reserve between 1974 and 1976. However, land continues to be removed from the Reserve and 86 percent of the land excluded since 2002 has been in regions with the highest concentration of prime farmland (BC Agriculture & Food Climate Action Initiative Advisory Committee, 2010, p.13).

Impacts of climate change on the food supply could result in "declines in yield and production, fluctuations in world food prices for food, changes in geographic distribution of trade regimes, and an increasing number of people at risk of hunger" (BC Agriculture & Food Climate Action Initiative Advisory Committee, 2010, p. 13). Movement towards local agricultural food production would reduce: the need for agricultural inputs, emissions and greenhouse gas production, and waste throughout the food chain, and would be a means to create a diversified, resilient and productive agricultural base (Altieri, 2004; Chappell & LaValle, 2009; Kremen, Iles & Bacon, 2012; Parmentier, 2014; Rosset, Sosa, Jaime, & Lozano, 2011).

5. Food Security and Food Sovereignty Actions in British Columbia

McRae (2011) outlines the complexity of shifting existing policy, legislation, regulation and structures of food policy in Canada and envisions three viable areas for food policy: "shifting production and export subsidies to subsidies that generate multiple benefits (ecological, social, and financial); supporting the transition to low-input production systems that reduce demands on government-funded farm financial safety nets; and investing in health promotion programs that reduce demands on acute care and government budgets" (McRae, 2011, p. 454).

5.1 – Food Policy Actions

In British Columbia there is evidence that a shift in food policy is occurring in the areas of health promotion and in a drive towards a more sustainable agri-food system. Actions to increase access to healthy foods, increase intake of fruits and vegetables (a proxy measure for diet quality) and to reduce access to high calorie, low nutritive foods, are health promotion and public health actions to reduce the prevalence of obesity and diet related diseases and chronic conditions (Dietitians of Canada, 2010; Ministry of Education, 2013; Ministry of Health, 2013; Seed, Lang, Caraher, & Ostry, 2013).

Food Security is a Core Program for Health Authorities. The Ministry of Health (MOH) provides funding and support towards community capacity building and for community led food security initiatives and evaluation (MOH, 2013). The Provincial Health Services Authority (PHSA) provides funding to food security initiatives implemented by Health Authorities across B.C. Priorities include engaging stakeholders, building evidence, informing policy and supporting community action. PHSA coordinates the Community Food Action Initiative (CFAI), "the first provincial initiative in Canada to recognize and financially support community-led solutions to increase food security" (PHSA, 2013). Health Authorities provide policy development and implementation, programs, monitoring, support for community led initiatives and evaluation (MOH, 2013; PHSA, 2013).

Community based initiatives to increase access to healthy foods including Food Skills for Families, Food Systems in Remote First Nations, BC Food Security Gateway, The Cost of Eating in BC, resource materials, toolkits and leadership tools, food preservation and safety resources (MOH, 2013). The Farmers' Market Nutrition Coupon Program, Farm to School, Farm to Campus, and Farm to Hospital programs, community gardens, farmers' markets, farming and food skill education, healthy foods for public buildings and school food guidelines, and food security hub initiatives, The Community Food Atlas for Vancouver Island and the Produce Availability in Remote Communities Initiative are initiatives that have received funding from the MOH (First Nation Health Authority (FNHA), 2009; Fraser Health (FH), 2011; Interior Health Authority (IHA), 2104; MOH, 2013; PHSA, 2013; Northern Health (NH), n.d.; Vancouver Coastal Health, VCH, 2013; Vancouver Island Health Authority (VIHA), 2013).

5.2 – First Nations Health Authority and Food Sovereignty

The First Nations Health Authority was established in 2013 through transferring Health Canada's First Nations Inuit Health (FNIH) Branch, BC Region, health service resources as a step towards achieving the vision of a self-determining and healthy community (First Nations Health Authority, 2013).

The First Nations Health Authority's concept of food sovereignty reflects indigenous food systems and sacred relationships within the environment. It is adapted to the Canadian context, where the impacts of colonisation and unresolved treaties and land claims have resulted in protest and legal actions to confirm constitutional rights to traditional homelands and self-determination, have disrupted traditional food and cultural practices, and impact the health of First Nations peoples (Food Secure Canada, 2011; British Columbia Food Systems Network, 2008; Desmarais & Wittman, 2013, pp. 13-16). Indigenous food sovereignty "is the Right of peoples, communities, and countries to define their own agricultural, labour, fishing, food and land policies, which are ecologically, socially, spiritually, economically and culturally appropriate to their unique circumstances" (First Nations Health Council, 2009).

5.3 – Sustainable Agriculture and Food System Policy

The Ministry of Agriculture Sustainable Management Branch fosters agrifood economic development and leads "regional delivery of environmental sustainability and resource development programs" (Ministry of Agriculture, 2013). Program areas are "strengthening farming, environmental programs and initiatives, waste management, regional agrologist network, agrifood business management, agricultural emergency preparedness, First Nations agriculture development, youth development, range and agroforestry" (Ministry of Agriculture, 2013) as well as encouraging "investment in agriculture, food and fisheries, and to foster

consistent approaches to solving urban/agricultural land use conflicts” (Ministry of Agriculture, 2013).

Metro Vancouver's Regional Food System Strategy (2011) is designed around a framework for "a sustainable, resilient and healthy food system that will contribute to the well-being of all residents and the economic prosperity of the region while conserving our ecological legacy” (Metro Vancouver, 2011, p. 4). The Dimensions of the framework are: increased capacity to produce food close to home; improve the financial viability of the food sector; people make healthy and sustainable food choices; everyone has access to healthy, culturally diverse and affordable food; a food system consistent with ecological health (Metro Vancouver, 2011).

5.4 – Universities, Community Agriculture and Sustainable Food Systems

Interdisciplinary University programs and community based projects of the Institute for Sustainable Food Systems at Kwantlen Polytech University (Kwantlen), the Centre for Sustainable Community Development Simon at Fraser University (SFU), University of British Columbia's (UBC) Centre for Sustainable Food Systems at UBC Farm, and the Institute for Studies & Innovation in Community-University Education at University of Victoria (UVic) have the potential to transform food systems through research, experiential learning and local, regional and international collaboration, community development and service and modeling of sustainable food systems (Kwantlen, 2014; SFU, n.d.; UBC, 2009; UVic, 2014).

Faculty at these Centres and Institutes collaborate in local, regional, national and international research into sustainable food and food systems practices and "explore and exemplify new globally significant paradigms for the design and function of sustainable communities and their ecological support systems" (Kwantlen and UBC). Collaboration between Universities, communities and municipalities has increased access to community and

municipal enabled sustainable agriculture, local food distribution, and education on sustainable agriculture and food system practices through projects such as Richmond School Farm and UBC farm.

Establishment of community based applied research has, for example, enabled investigation into the direct economic, environmental, and social benefits that could result if municipalities invested in and supported small scale agriculture in their communities....[and] has demonstrated significant potential for increased food security, a reduction of farmland loss to urban sprawl, job creation, and wealth generation (Kwantlen Polytech University, 2014).

To a large degree, the success of some of the Global South movements towards food sovereignty has been due to the shared learning and experiences of farmers and food producers (Rosset, Sosa, Jaime, & Lozano, 2011; Rojas, Mansfield, Orrego, Chapman, & Harlap, 2011). Community based agriculture, along with education and skill development, adds to the sustainability of food systems, and reflects both food security and food sovereignty principles.

5.5 – Access to Local Food and Food Production

Community organizations lead the majority of food initiatives for local food production, distribution and marketing. Organizations are involved in social movement advocacy, networks, community projects, education and skill development and funding support for local food production (BC Food Systems Network, 2013; Farm Folk City Folk, 2014; Food Secure Canada, 2011; Young Agrarians, 2013). Many other organizations and charities are involved in the actions of urban farms, food shares, soup kitchens, community kitchens, good food boxes and gleaning. The networks implement innovative agro-ecological practices, and agitate for agri-food reform and policy change, social justice and rights. These actions hold out the promise of

shifting the B.C. environment towards a more sustainable food system that considers the health and well-being of people within the system.

Some of the actions are those of "foodies" who are interested in local foods for health, variety and freshness, but the main actions are those of individuals and organizations working towards acquiring the rights of food sovereignty and sustainable food systems (Desmarais & Wittman, 2013). The ability to produce food is an important component of food sovereignty, and may be a critical factor in sustainable food systems (Baker, 2004; Buchman, 2009). Actions of local food activists promote the adoption of enabling policy within government to make local small-scale sustainable food production a more viable option.

However, without a coherent food policy or poverty reduction strategy, or satisfactory resolution and restitution of post-colonial issues and Aboriginal peoples rights, it will remain difficult to fully address the key underpinnings of food insecurity in B.C.

6.0 Conclusion: Food Sovereignty Movements for Rights and Agency

Goals towards self-reliance, economically viable and sustainable local food systems, and accessibility of healthy food are areas where there is potential to find common ground between the concepts of food security and food sovereignty. There is the potential to reduce the carbon footprint, increase revenues, and reduce health care costs through local sustainable farming and healthy food distribution. However, where there is apparent integration in construct dimensions, there may be discord in the approaches to resolve underlying issues of food security. For example, industrial aquaculture may be viewed as a sustainable practice in terms of productivity, but could be viewed as a destructive practice in terms of the wild fishery and Aboriginal peoples' rights. The same could be said for large scale industrial farming with high productive yield, where the high fuel inputs and volume production for export may be perceived as more

destructive than agro-ecological small farming practice with low inputs and a short food chain to local markets.

The areas of participatory decision-making and rights may prove more challenging without coordinated and sustained actions of social movements. The adoption of a poverty reduction strategy, ecological protection and conservation, the distancing of industry from the food system, and the attainment of Aboriginal peoples rights are areas that food sovereignty movement constituents will need to continue to work on across boundaries from within and outside of government.

Supporters of the food sovereignty movements adhere to the concept that policies related to food production, traditional hunting, fishing and food garnering need to be decided by local communities, farmers, fisher folk and Aboriginal peoples. In the face of pressure from social movements as well as corporations, National and provincial governments will need to balance the rights of people with economic and development agendas and commitments. It is expected that food sovereignty social movements will continue to challenge these rights issues through legal actions, civil actions, petitions and through election outcomes.

7. Appendix A

Interdisciplinary Comparisons of Food Security and Food Sovereignty

Conceptual Frameworks	Food Security	Food Sovereignty
Underlying Theories	Modernist : Market Rationality (Pareto optimum), Possessive Individualism, Social Rationality, Economic Rationalism	Hybrid: Social Rationality, Technical Reason, Critical-constructivist, Green Rationalism, Agro-ecology
Disciplinary Perspectives	Classical economy, Economic efficiency and industrialization, Bio-Economic, Agricultural, Nutrition	Hybrid: Food sovereignty, Agro-ecology, Political ecology, Human rights and Livelihoods, Nutrition, with ecological, social, political and economic dimensions
Problem and Solution Perspective	<p>Inadequate agricultural production and trade/distribution to meet emerging needs. Nutrition and social interventions through, health, sanitation and education, targeting women, policies, programs, reforms, improvements in the investment climate.</p> <p>Sustainability and food access/security comes from intensive, efficient production and scientific innovation. Free trade and agricultural efficiency lead to positive food commodity trade balances, improved profit and national economic improvement and development.</p>	<p>Food insecurity is due to negative environmental, social and economic outcomes of conventional agro-industrial policy and system, food dumping and displacement of farmers and traditional, indigenous and genetic knowledge and resources.</p> <p>Local agroecological production and distribution and policy, with protection of local markets and rights, leads to redesign and a sustainable social, environmental and economic food system, maintains biodiversity and a healthy environment, reduces poverty, improves livelihoods and wellbeing. Fair trade spurs economic growth.</p>
Historical Foundations	<p>Political Economic Colonialism, nation states, Western hegemony/globalization, free markets/capitalism, market intervention/regulation, agriculture as a national sector</p> <p>Agro Economic increase in power of agro-food corporations, elite consumer demands, agricultural industrialization, bio technology</p> <p>Social Economic Environmental development project, cold war,</p>	<p>Ecological Roots in ecology at the farm level</p> <p>Agro Economic Social Environmental Northern agribusiness subsidies and lowered trade barriers, cheap exports undercut small farming culture in the North and South and ecosystem management.</p> <p>Rights Human rights - access rights, rights to food, rights to produce food, indigenous rights, rights to genetic and natural resources</p> <p>Social movement responses to the</p>

	<p>surplus/food aid complex</p> <p>Rights Rights to food, freedom from hunger, food security (post World War II)/household food security Development work has focused mainly on availability (increase productivity, imports). Where access is addressed, the focus is on economic access, promoting high value crops over subsistence production.</p>	<p>negative environmental, social and economic externalities of the agro-industrial system (Failure of Green Revolution Technology, profit-driven agricultural development, bio technology)</p>
Concept	<p>"A situation that exists when all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2013).</p>	<p>"The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (La Via Campesina, 1996).</p>
Principles and Pillars	<p>Availability, Access, Utilization, Stability (FAO, 2013). Community Food Security: Availability, Accessibility, Adequacy, Acceptability, and Agency (Ryerson University) (Rocha, 2008)</p>	<p>Focuses on Food for People, Values Food Providers, Localises Food Systems, Puts Control Locally, Builds Knowledge and Skill, Works with Nature (La Via Campesina, 2007). Recognizes that Food is Sacred (Food Secure Canada, 2011)</p>
Constituency	<p>UN, governments, NGOs, civil society, agricultural research, financial institutions, private sector, philanthropy working to feed the hungry Spatial: globalized, use of external resources, export-oriented</p>	<p>Participatory networks/coalitions, regional governance. Decision making, including for policy, with food producers, farmers, fisher folk, indigenous peoples, youth organizations, trade unions working towards sustainability. Spatial: local community and resources</p>
Systems	<p>National and regional food systems, food supply and food supply chains.</p>	<p>Sustainable agri-ecological food systems - ecological, social and economic dimensions"</p>
Actions	<p>International coordination and information exchange related to food production and food insecurity. Development projects to increase efficiency and productivity, reduce cost of inputs, free trade, profit, economic access, intensification through ecological and genetic engineering and technical</p>	<p>Agro-ecology, agri-food networks within a local context; hybrid ecological economic practices, social movement actions and participatory approaches, regional governance and self-sufficiency, community controlled local resources, just allocation of land and resources, fair trade, inclusion of traditional and indigenous knowledge, no separation of agricultural and environmental policy, protection of</p>

	<p>development, field trials, corporatization/privatization, limited government participation other than in resource extraction policy/control Monitoring food security indicators (FAO, UN, National, Regional).</p>	<p>biodiversity and conservation areas, public funding, education, skill development, social capital, value for women. Social movement actions, Southern and Northern, towards increase in human rights and integration of food sovereignty and agro-ecological practice. Action research and social learning.</p>
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Author's synthesis from Barthel and Isendahl (2013); Fairbairn (2008); Fernandez, Mendez, and Bacon (2013); Lang and Barling (2012); Marsden (2012); Parmentier (2014); Reardon and Pérez (2010); Wittman (2011) and Vallejo-Rojas, Ravera and Rivera-Ferre (2013).

8. Appendix B
 Food Security and Food Sovereignty Concepts in British Columbia

Source	Label	Concept
Government of Canada (2009)	Food Security	All people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Government of Canada, 1998).
Government of British Columbia, Ministry of Health (2013)	Food Security	The foundation for healthy eating and requires a stable and sustainable food supply from production to disposal. A person is considered food secure if they can access with dignity, affordable, healthy food that is safe, culturally appropriate, and meets their nutritional needs and preferences.
Provincial Health Services Authority (2013)	Food Security	A community is “food secure” when everyone obtains a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes self-reliance and justice.
First Nations Health Authority (2009)	Food Sovereignty	The Right of peoples, communities, and countries to define their own agricultural, labour, fishing, food and land policies, which are ecologically, socially, spiritually, economically and culturally appropriate to their unique circumstances.
Fraser Health (2011)	Food Security	When all people, at all times, have access to nutritious, safe, personally acceptable and culturally appropriate foods obtained in a manner that maintains human dignity.
Interior Health Authority (2014)	Community Food Security	Exists when all citizens obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self reliance and equal access for everyone.
Northern Health (n.d.)	Food Security	Exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.
Vancouver Island Health Authority (2013)	Food Security	Means having access to safe, culturally acceptable, and nutritional food. The principles of food security are sustainability, self-reliance and social justice. A sustainable community food system improves the health of the community, environment and individuals over time.
Vancouver Coastal Health (2013)	Food Security	Is a broad concept, encompassing the safety, quality and sustainability of our food supply. It's not just about having enough food to eat. It's about ensuring that all people have equal access to healthy, culturally-appropriate food produced in a sustainable way.
Food Secure	Food	Food Sovereignty is the right of peoples to healthy and

Canada(2011)	Sovereignty	culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems." Seven Pillars of Canadian Food Sovereignty: 1. Focuses on Food for People 2. Values Food Providers 3. Localizes Food Systems 4. Puts Control Locally 5. Builds Knowledge and Skills 6. Works with Nature and 7. Recognizes that Food is Sacred (from <i>Resetting the Table - People's food policy recommendations</i>).
Dietitians of Canada (2007)	Community Food Security	As a process and an outcome, exists when all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone (Dietitians of Canada, 2007, p. 2).
BC Food Systems Network	Community Food Security	By community food security, we mean a sustainable food system in which: - everyone is able to acquire, in a dignified manner, adequate quantity and quality of personally acceptable food; people are able to earn a living wage by growing, producing, processing, handling, retailing and serving food; the quality of land, air and water are maintained and enhanced for future generations; and food is recognized as the basis of health and celebrated as central to community and cultural integrity. We recognize that food is essential to life and is therefore a human right. It is also a gift from the Creator, so both the food and its sources must be honoured.
UVic	Community Food Security	A community enjoys food security when all people, at all times, have access to nutritious, safe, personally acceptable and culturally appropriate foods, produced in ways that are environmentally sound and socially just.
UCDavis (2014)	Sustainable community food system	Is a collaborative network that integrates sustainable food production, processing, distribution, consumption and waste management in order to enhance the environmental, economic and social health of a particular place. Farmers, consumers and communities partner to create a more locally based, self-reliant food economy.

(BC Food Security Gateway; Dietitians of Canada, 2007; FNHA, 2009; FH, 2011; Food Secure Canada, 2011; Government of Canada, 2009; IHA, 2104; MOH, 2013; PHSA, 2013; VCH, 2013; VIHA, 2013; UCDavis, 2014; UVic, 2014)

9. Appendix C

Consolidation of Dimensions and Pillars of Food Security and Food Sovereignty

Availability	Enough food is available to meet all people’s needs
Accessibility	People obtain adequate, affordable, healthy foods that meet their nutritional, cultural, sacred and ceremonial needs and obtain the resources needed to produce and garner food. Agri-food production and distribution create direct links between farmers and consumers and improve working conditions and livelihoods.
Stability	A stable sustainable food supply, with a base of family farms that use agro-ecological production practices, emphasizes local inputs from production to disposal, and limits negative impacts to the environment, and that retains genetic, traditional knowledge and diversity (Works with Nature and Builds Knowledge and Skills).
Adequacy	Available food is healthy and safe and produced in environmentally sustainable ways (Utilization).
Acceptability	Food is culturally acceptable and produced and obtained in ways that do not compromise people’s dignity and self-respect. Traditional foods are available daily and for cultural, cultural harvesting and ceremonial practices (Recognizes that Food is Sacred).
Agency	Policies, processes and monitoring are developed with direct resident involvement to enable and promote food security and food sovereignty, local and sustainable food production, processing and consumption and knowledge, and individual, environmental and community health; reconciliation of Indigenous food and cultural values with laws, policies and economic activities; provide a framework for policy reform in forestry, fisheries, rangeland, environmental conservation, health, agriculture, and rural and community development. (Focuses on Food for People, Values Food Providers)
Rights	The right to food; the right to food is sacred. The right to produce food and access production resources - land, water, genetic and natural resources and benefit from their use; It is a sacred responsibility to nurture healthy, interdependent relationships with the land, plants and animals that provide us with our food; Puts Control Locally Human rights Self-determination- The ability to respond to our own needs for healthy, culturally adapted Indigenous foods. The ability to make decisions over the amount and quality of food we hunt, fish, gather, grow and eat. Freedom from dependence on grocery stores or corporately controlled food production, distribution and consumption in industrialized economies.

(BC Food Security Gateway; Dietitians of Canada, 2007; FNHA, 2009; FH, 2011; Food Secure Canada, 2011; Government of Canada, 2009; IHA, 2104; MOH, 2013; PHSA, 2013; VCH, 2013; IHA, 2013; UCDavis, 2014; UVic, 2014; Working Group on Indigenous Food Sovereignty, Indigenous Food Systems Network, 2008)

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